

A NEW SPIDER OF THE GENUS *PORRHOMMA*
(ARANEAE : LINYPHIIDAE) FROM CAVES OF
TOCHIGI PREFECTURE, JAPAN

By

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Synopsis

SAITO, Hiroshi (3-772 Asahi-cho, Ashikaga City) : A new spider of the genus *Porrhomma* (Araneae : Linyphiidae) from caves of Tochigi Prefecture, Japan. *Acta Arachnol.*, 27 : 48-52 (1977). Up to the present, four species of spiders belonging to the genus *Porrhomma* SIMON have been recorded in Japan, but only one species, *P. montanum* JACKSON, has been recorded from Japanese caves, more precisely from the lava caves around Mt. Fuji.

Investigating the cave spiders of Tochigi Prefecture, the author collected a spider of this genus, which seemed to belong to a new species. It is described in this paper under the name of *P. ohkawai*.

***Porrhomma ohkawai* n. sp.**

[Japanese name : Horaana-saragumo]

(Figs. 1-7)

Type-series : Daishi-no-iwaya Cave, Izuru, Tochigi City, Tochigi Prefecture, 17-II-1974, ♂, ♀, 21-III-1975, 2♂, 3♀, 5-V-1975, 2♂, many ♀, 16-V-1976, 3♂, 5♀, 13-VI-1976, 2♂, ♀ ; Sengenfudô-no-iwaya Cave, Izuru, Tochigi City, Tochigi Prefecture, 21-III-1975, 2♂, 2♀, 13-VI-1976, ♂, 2♀.

Collector : H. OHKAWA & H. SAITO.

Holotype (♂). Daishi-no-iwaya Cave, Izuru, Tochigi City, Tochigi Prefecture, 17-II-1974 (coll. H. OHKAWA).

Total length 1.73 mm ; Cephalothorax 0.98 mm long, 0.75 mm wide. Carapace yellowish brown, with somewhat darker cervical grooves and radial furrows. Carapace viewed from above long pear-shaped, and viewed from the side evenly and gently ascending to the ocular area.

Head about twice as wide as ocular area, with several hairs. Clypeus longer than median ocular area and slightly concave beneath eye area. Anterior

median and posterior median eyes only perceptible by pale marks beneath the integument, and anterior median eyes a little larger than posterior median eyes. Anterior median eyes separated from each other by about twice the diameter, from anterior laterals by more than 4 times the diameter. Lateral eyes slightly separated from each other, posterior lateral eyes a little larger than anterior laterals. Sternum pale yellowish brown, convex, heart-shaped, with sparse brown hair, and narrowly protruding between hind coxae; anterior margin slightly procurved. Labium wider than long in the ratio about 3:1. Chelicerae dark brownish yellow, armed with three large promarginal and four very minute retromarginal teeth. Legs semitransparent yellowish brown. Femur I with four dorsal spines and one retrolateral spine. Femur II with one dorsal spine. All tibiae with two dorsal spines and about fivetrichobothria, tibia I also with one prolateral and one retrolateral spines. Metatarsus IV without trichobothrium, Tm. 1 ca. 0.26.

Measurements of legs (in mm) are as follows.

(♂)

Legs	Fem.	Pat. & Tib.	Met.	Tar.	Total
I	1.65	1.75	1.43	0.85	5.68
II	1.45	1.65	1.25	0.78	5.13
III	1.10	1.10	0.93	0.65	3.77
IV	1.55	1.63	1.38	0.75	5.31

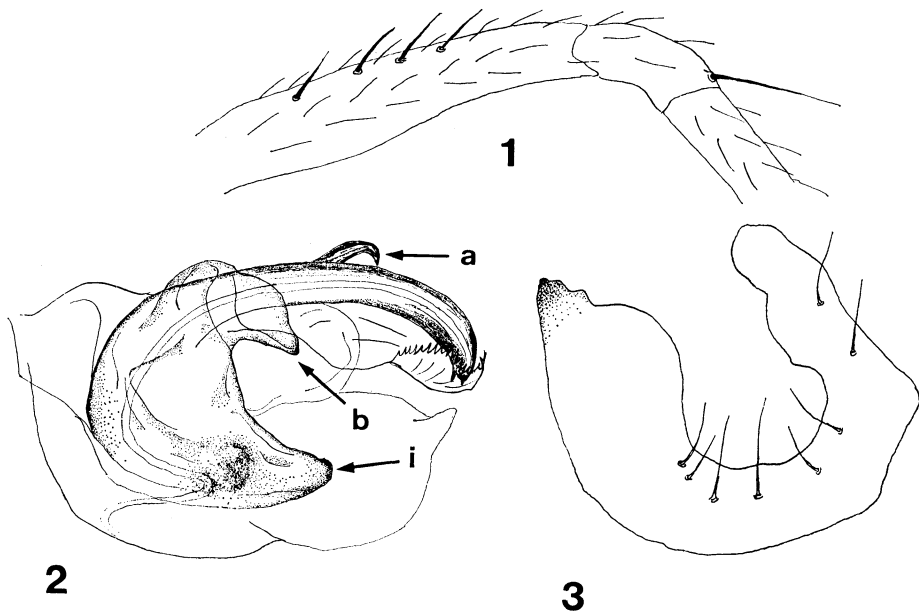
Abdomen pale gray, and oval in shape.

Male palp: Embolus broad, with the pointed part covered with a membranous conductor curving downwards. Superior apophysis very short in comparison with embolus, curving downwards. Anterior apophysis long, with the pointed part beak-shaped; an inferior apophysis protruding forwards and blunt at the tip.

Allotype (♀). Daishi-no-iwaya Cave, Izuru, Tochigi City. Tochigi Prefecture, 21-III-1975.

Total length 2.30 mm; Cephalothorax 1.05 mm long, 0.80 mm wide. Abdomen 1.45 mm long, 0.86 mm wide.

Similar to the holotype in color and shape. Posterior median eyes absent, and palp with a spine-like claw. Palpal patella with one dorsal spine, and the tibia with one dorsal and one retrolateral spines. Epigyne with an ovate opening, the anterior edge arched, and the posterior edge with a small dimple.



Figs. 1-3. *Porrhomma ohkawai* n. sp. (♂). 1. Femur I. 2. Palpal organ. a=anterior apophysis, b=superior apophysis, i=inferior apophysis. 3. Paracymbium.

Measurement (in mm)

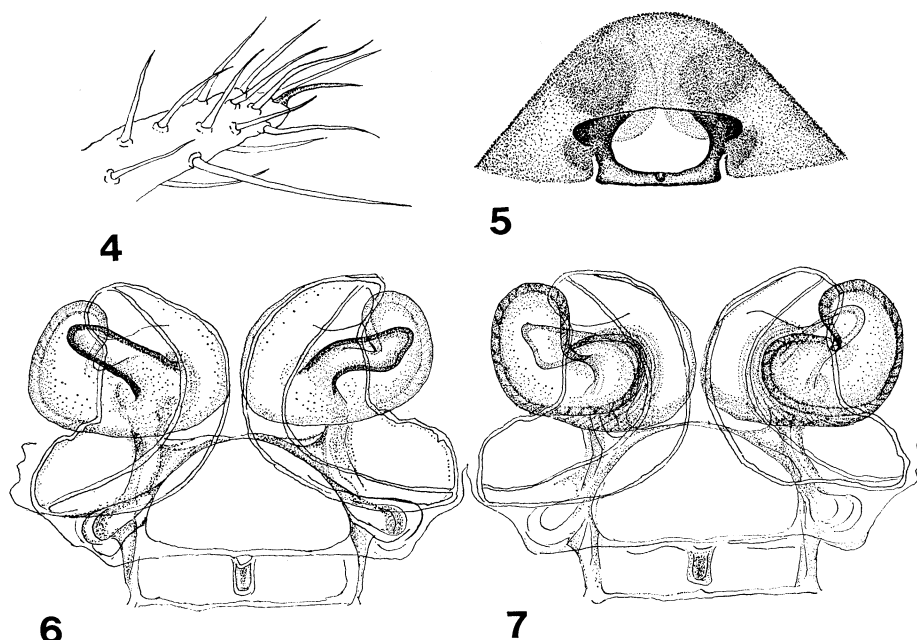
(♀)

Legs	Fem.	Pat & Tib.	Met.	Tar.	Total
I	1.53	1.63	1.30	0.88	5.34
II	1.43	1.58	1.25	0.80	5.06
III	1.13	1.13	0.95	0.60	3.81
IV	1.45	1.58	1.25	0.75	5.03
Palp	0.38	0.32		0.44	1.14

Remarks: The present new species closely resembles *P. rosenhaueri* (L. KOCH) and *P. kolosvaryi* KRATOCHVIL, but differs from them in the structure of male palp, epigynum and dorsal spines of femur. It was named after Mr. Hideo OHKAWA who first collected the species in Daishi-no-iwaya Cave in Tochigi Prefecture. The type-series of this new species are preserved in the collection of the Arachnological Society of East Asia.

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Figs. 4-7. *Porrhomma ohkawai* n. sp. (♀). 4. Palp. 5. Epigynum. 6. Genitalia (ventral view). 7. Genitalia (dorsal view).

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摘 要

齊藤 博 (栃木県足利市旭町 3-772) : 栃木県産 *Porrhomma* 属の一新種。
 栃木県の洞窟より *Porrhomma* 属 (サラグモ科) の一新種を記載した。本種はヨーロッパの洞窟より産する *P. rosenhaueri* (L. KOCH) や *P. kolosvaryi* KRATOCHVIL によく類似している。しかし、雄の触肢や雌の外雌器などにより区別できる。

References

- BONNET, P., 1958. Bibliographia Araneorum. II (4) : 3207-4203. Douiadoure, Toulouse.
 BRAUN, R., 1911. Zur Kenntnis der Spinnenfauna in Fichtenwäldern höherer Lagen des Harzes. *Senck. biol.*, 42(4) : 375-395.
 MILLER, F. & J. KRATOCHVIL, 1940. Ein Beitrag zur Revision der mitteleuropäischen Spinnenarten aus der Gattung *Porrhomma* E. SIM. *Zool. Anz.*, 130 (7/8) : 161-190.
 OI, R., 1960. Linyphiid Spiders of Japan. *J. Inst. Polytechnicus, Osaka City Univ.* (D) 11 : 137-244., pls. 1-26.

- 1964. A supplementary note on Linyphiid spiders of Japan. *J. Biol. Osaka City Univ.*, **15**: 23-30.
- SIMON, E., 1884. Les Arachnides de France. Roret Paris. **5** (2, 3) : 181-885, pl. 26-27.
- 1926. Les Arachnides de France. Mulo, Paris. **6**(2) : 309-532.
- THALER, K., 1968. Zum Vorkommen von *Porrhomma*-Arten in Tirol und anderen Alpentänden. *Ber. Nat.-Med. Ver. Innsbruck.*, **56** : 361-388.
- TRETZEL, E., 1956. Ein Beitrag zur Systematik und Verbreitung mitteleuropäischer Arten aus der Gattung *Porrhomma* (Aranese. Linyphiidae). *Zool. Anz.*, **157**(3/4) : 42-56.
- WIEHLE, H., 1956. Linyphiidae. *Tierwelt Deutschlands*, **44** : 1-337, Fisher, Jena.
- YAGINUMA, T., 1970. The Spider fauna of Japan. *Bull. Natn. Sci. Mus., Tokyo* **13** : 639-701.
- 1972. The fauna of the lava caves around Mt. Fuji-san. IX. Araneae (Arachnida). *Bull. Natn. Sci. Mus. Tokyo*, **15** : 267-334.